

# Packaging profisis

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# Overview

- Setting up the system
- Setting up the build system
- Packaging / Debian files

# Preliminary tasks

- Create Alioth account
- `reportbug --email <email> wnpp`
  - Creates a new bug report for this package
  - The assigned bug report number is required later for the changelog

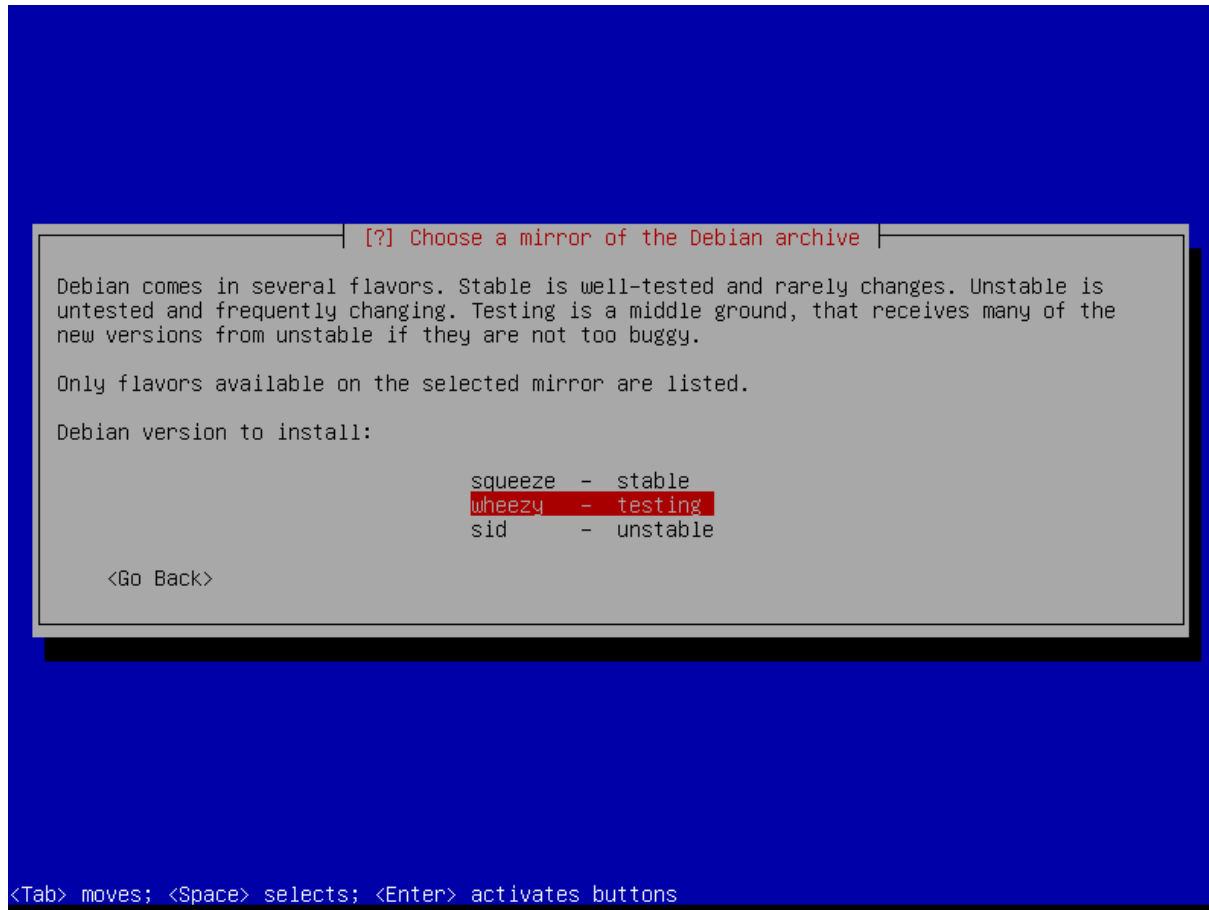
# Installing Debian Unstable

- Packages should be packaged using “Unstable”
- Instead of a chroot, I decided to use a VM
  - Create the VM (e.g. in Virtualbox)
  - Download “businesscard” ISO of Wheezy Alpha 1
  - Install in “Expert mode” or use option “priority=medium”

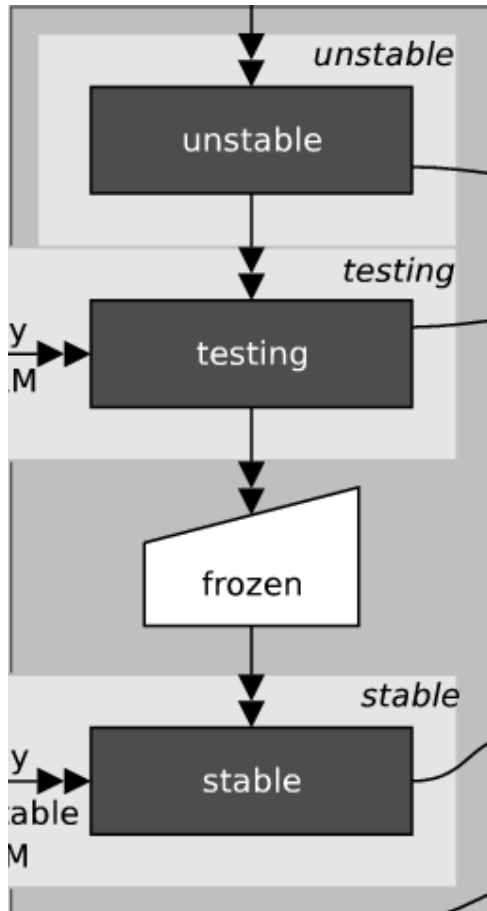
# Installing Debian Unstable (cont.)



# Installing Debian Unstable (cont.)



# Sid



# Setting up the build environment

- All required packages can be installed via meta-packages:

```
$ apt-get install dpkg-dev \  
packaging-dev dh-make
```

# Subversion setup

- Create package folders in SVN

```
$ svn mkdir --parents  
svn+ssh://svn.debian.org/svn/debian-  
med/trunk/packages/roslab/profisis/{trunk,tags}  
-m 'Add repository directory for profisis --  
Protein binding sites prediction (ISIS)'
```

- Checkout package folder

```
$ svn checkout  
svn+ssh://svn.debian.org/svn/debian-  
med/trunk/packages/roslab/profisis/
```

## SVN setup (cont.): svn-buildpackage

- Create directories for svn-buildpackage and ignore them

```
$ mkdir ../tarballs ../build-area  
$ svn propedit svn:ignore .
```

- Install debian folder

```
$ mkdir debian  
$ svn add debian  
$ svn pset mergeWithUpstream 1 debian
```

# Generating initial debian/\* files

```
$ dh_make \  
--file ../tarballs/profisis-1.0.6.tar.gz \  
--indep \  
--copyright gpl \  
--packagename profisis_1.0.6
```

```
cedric::cedric ../profisis/trunk/debian ▶ ls  
changelog  emacsen-install.ex  manpage.sgml.ex  preinst.ex  README.Debian  
compat     emacsen-remove.ex   manpage.xml.ex   prerm.ex    README.source  
control    emacsen-startup.ex  menu.ex          profisis.cron.d.ex  rules  
copyright  init.d.ex           postinst.ex      profisis.default.ex source  
docs       manpage.1.ex        postrm.ex        profisis.doc-base.EX watch.ex
```

# Building the package

When everything is set up, it is simple as a

```
$ svn-buildpackage --svn-reuse --svn-ignore
```

# debian/watch

```
1 # watch control file for uscan
2 version=3
3 ftp://roslab.org/free/profisis-([0-9.]+)\.tar\.gz debian update
4
```

```
cedric::cedric ../packaging/profisis/trunk > uscan --verbose --destdir=../tarballs --force-download
-- Scanning for watchfiles in .
-- Found watchfile in ./debian
-- In debian/watch, processing watchfile line:
  ftp://roslab.org/free/profisis-([0-9.]+)\.tar\.gz debian update
-- Found the following matching files:
  profisis-1.0.6.tar.gz
Newest version on remote site is 1.0.6, local version is 1.0.6
=> Package is up to date
Newest version on remote site is 1.0.6, local version is 1.0.6
=> Forcing download as requested
-- Downloading updated package profisis-1.0.6.tar.gz
-- Successfully downloaded updated package profisis-1.0.6.tar.gz
  and symlinked profisis_1.0.6.orig.tar.gz to it
-- Executing user specified script
  update --no-symlink --upstream-version 1.0.6 ../tarballs/profisis_1.0.6.orig.tar.gz
New Release will be 1.0.6-1.
update: new version 1.0.6-1 <= current version 1.0.6-1; aborting!
-- Scan finished
```

# debian/control

```
1 Source: profisis
2 Section: science
3 Priority: optional
4 Maintainer: Debian Med Packaging Team <debian-med-packaging@lists.alioth.debian.org>
5 Uploaders: Cedric Staniewski <cedric@gmx.ca>
6 Build-Depends: debhelper (>= 9)
7 Standards-Version: 3.9.3
8 Homepage: http://www.predictprotein.org/
9 Vcs-Browser: http://svn.debian.org/wsvn/debian-med/trunk/packages/roslab/profisis/trunk/
10 Vcs-Svn: svn://svn.debian.org/debian-med/trunk/packages/roslab/profisis/trunk/
11
12 Package: profisis
13 Architecture: all
14 Depends: ${shlibs:Depends}, ${misc:Depends}, libconfig-inifiles-perl, profnet-isis
15 Recommends: librg-utils-perl, pp-popularity-contest
16 Description: protein-protein interaction sites identified from sequence
17 Profisis (ISIS) is a machine learning-based method that identifies interacting
18 residues from sequence alone. Although the method is developed using transient
19 protein-protein interfaces from complexes of experimentally known 3D
20 structures, it never explicitly uses 3D information. Instead, predicted
21 structural features are combined with evolutionary information. The strongest
22 predictions of the method reached over 90% accuracy in a cross-validation
23 experiment. The results suggest that despite the significant diversity in the
24 nature of protein-protein interactions, they all share common basic principles
25 and that these principles are identifiable from sequence alone.
26
```

# Issues with debian/control

1.

```
cedric::cedric ~/packaging > lintian --display-experimental --display-info --pedantic profisis_1.0.6-1_all.deb  
I: profisis: using-first-person-in-description line 4: we  
I: profisis: using-first-person-in-description line 7: Our
```

Solution: reworded description

2.

```
cedric::cedric ../profisis/build-area > lintian --display-experimental --display-info --pedantic *.changes  
E: profisis source: no-human-maintainers  
W: profisis source: changelog-should-mention-nmu  
W: profisis source: source-nmu-has-incorrect-version-number 1.0.6-1  
W: profisis source: out-of-date-standards-version 3.9.2 (current is 3.9.3)
```

Solution:

- Add “Uploaders” to control file
- Increase Standards-Version

# debian/changelog

```
1 profisis (1.0.6-1) unstable; urgency=low
2
3   * Initial release (Closes: #680106)
4
5   -- Cedric Staniewski <cedric@gmx.ca>  Mon, 09 Jul 2012 20:22:37 +0200
6
7 profisis (1.0.5) stable; urgency=low
8
9   * warn if pp-popcon is not installed
10
11  -- Laszlo Kajan <lkajan@rostlab.org>  Mon, 28 Feb 2011 18:17:50 +0100
12
```

# debian/copyright

```
1 Format: http://www.debian.org/doc/packaging-manuals/copyright-format/1.0/
2 Upstream-Name: profisis
3 Source: http://www.predictprotein.org/
4
5 Files: *
6 Copyright: 2006 Yanay Ofra
7            2006 Burkhard Rost
8 License: GPL-3.0+
9
10 Files: debian/*
11 Copyright: 2012 Cedric Staniewski <cedric@gmx.ca>
12 License: GPL-3.0+
13
14 License: GPL-3.0+
15 This program is free software: you can redistribute it and/or modify
16 it under the terms of the GNU General Public License as published by
17 the Free Software Foundation, either version 3 of the License, or
18 (at your option) any later version.
19 .
20 This package is distributed in the hope that it will be useful,
21 but WITHOUT ANY WARRANTY; without even the implied warranty of
22 MERCHANTABILITY or FITNESS FOR A PARTICULAR PURPOSE. See the
23 GNU General Public License for more details.
24 .
25 You should have received a copy of the GNU General Public License
26 along with this program. If not, see <http://www.gnu.org/licenses/>.
27 .
28 On Debian systems, the complete text of the GNU General
29 Public License version 3 can be found in "/usr/share/common-licenses/GPL-3".
30
```

# Issues with debian/copyright

- First:

```
$ apt-get install libconfig-model-perl
```

```
cedric::cedric ../packaging/profisis/trunk > cme fix dpkg-copyright
Fixing...
Warning in 'Format' value 'http://dep.debian.net/deps/dep5': Format does not match the recommended URL for DEP-5
Changes:
- Format: 'http://dep.debian.net/deps/dep5' -> 'http://www.debian.org/doc/packaging-manuals/copyright-format/1.0/'
# applied fix
```

Solution: automatically fixed :)

# debian/rules

```
1 #!/usr/bin/make -f
2 # -%- makefile -%-
3
4 # Uncomment this to turn on verbose mode.
5 #export DH_VERBOSE=1
6
7 %:
8     dh $@
9
```

# debian/upstream

- YAML-formatted file
  - Colon is a special character
  - see for reference: <http://yaml.org/refcard.html>

```
1 Bug-Database: https://roslab.org/bugzilla3/buglist.cgi?product=profisis&component=profisis&resolution=---
2 Bug-Submit: https://roslab.org/bugzilla3/enter\_bug.cgi?product=profisis
3 Reference:
4   Author: Yanay Ofran and Burkhard Rost
5   Title: "ISIS: interaction sites identified from sequence"
6   Journal: Bioinformatics
7   Year: 2007
8   Volume: 23
9   Number: 2
10  Pages: e13-e16
11  DOI: 10.1093/bioinformatics/btl303
12  PMID: 17237081
13  Type: article
14  URL: http://bioinformatics.oxfordjournals.org/content/23/2/e13.abstract
15  Eprint: http://bioinformatics.oxfordjournals.org/content/23/2/e13.full.pdf+html
```

# Arch PKGBUILD

```
1 pkgname=profisis
2 pkgver=1.0.6
3 pkgrel=1
4 pkgdesc="Protein-protein interaction sites identified from sequence (ISIS)"
5 arch=('any')
6 url="http://www.predictprotein.org/"
7 license=('GPL')
8 depends=('perl-config-ini' 'profnetwork-isis')
9 optdepends=('librg-utils: parser and format conversation utils'
10 'pp-popularity-contest: send anonymous usage statistics to the developers')
11 source=(ftp://roslab.org/free/$pkgname-$pkgver.tar.gz)
12 md5sums=('c6cc5b9f1ae9ab90f35c73c8b500fc6a')
13 sha256sums=('dca9f175df4ea9bd3770ddf32e46a3779f5de33ea3779325a0f69fd114540af3')
14
15 build() {
16     cd "$srcdir/$pkgname-$pkgver"
17     ./configure --prefix=/usr
18     make
19 }
20
21 package() {
22     cd "$srcdir/$pkgname-$pkgver"
23     make DESTDIR="$pkgdir/" install
24 }
```

# Thanks